Phase (check one)	Type (check one)
Initial Site Investigation Corrective Action Feasibility Investigation Corrective Action Plan Corrective Action Summary Report Operations & Monitoring Report	Work Scope Technical Report PCF Reimbursement Request General Correspondence

## INITIAL SITE INVESTIGATION

3640 SHELBURNE ROAD SHELBURNE, VERMONT

PROJECT NO. N98496E

98-2561

A Facility Owned By:
Mr. Joseph R. Alosa Sr., President
Patsy's GMC-Kenworth
31 Hall Street
Concord, NH 03301

Prepared By:
Jaworski Geotech, Inc.
150 Zachary Road
Manchester, NH
(603) 647-9700
Contact: Debbie A. Cornn

January 28, 2000



January 28, 2000

Mr. Joseph R. Alosa. Sr., President Patsy's GMC-Kenworth 31 Hall Street Concord, NH 03301

Re:

Initial Site Investigation Report Green Mountain Kenworth Shelburne, Vermont

Project No. N98496E

SERVICES

Geotechnical
Environmental
Construction

Underground Tank
 Materials Testing

Dear Mr. Alosa:

Jaworski Geotech, Inc. is pleased to provide you with this report presenting the results of our Initial Site Investigation for the above-referenced property. This Initial Site Investigation was conducted to assess the environmental conditions at the property as they may pertain to State of Vermont regulations concerning hazardous materials and petroleum products.

The environmental conditions of the site were evaluated by conducting a limited site reconnaissance, reviewing the available environmental history of the site and area, performing a stadia survey, advancing five test borings, installing four groundwater monitoring wells, field screening of soils, and analyzing soil and groundwater samples. A summary of the field activities, conclusions and recommendations is provided in the attached report.

We trust that the contents of this report will satisfy your present needs. Should you have any questions with respect to the contents of the report, or if we can be of further assistance to you, please do not hesitate to contact our office.

We thank you for this opportunity to have been of service to you on this project and look forward to working with you in the future.

Very truly yours,

JAWORSKI GEOTECH, INC.

mod. I selle C

Debbie A. Cornn

/cid

Attachment

cc: Mr. Chuck Schwer

Michael R. Burke, CPG

ZI R Buk

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## 1.00 INTRODUCTION

This report was prepared by Jaworski Geotech, Inc. (JGI) to present the results of an Initial Site Investigation (ISI) completed for the property located at 3640 Shelburne Road in Shelburne, Vermont. The 5.1-acre site is presently occupied by a two-story office building, a portion of which is utilized as a tractor-trailer service station.

Contamination of both soil and groundwater was discovered in November 1998 during the removal of two 1,000-gallon waste oil underground storage tanks (USTs) located at the rear of the property. Analytical results of the soil samples submitted detected elevated concentrations of metals and benzene, toluene, ethylbenzene and xylenes (BTEX) compounds. Therefore, a subsurface investigation was recommended.

This study included a limited site reconnaissance, a review of available information regarding the environmental history of the site and adjacent area, performance of a stadia survey, the advancement of five test borings and the installation of four monitoring wells, and the laboratory analysis of two soil and four groundwater samples. The purpose of this study was to make an evaluation regarding the probability of hazardous chemicals, oils, or gasoline having been released at the site. The investigation completed was done in accordance with the Vermont Department of Environmental Conservation (DEC) recommendations as stated in a letter dated February 23, 1999. The scope of this ISI was outlined in a proposal dated November 1, 1999, which was subsequently approved with modifications on November 17, 1999. The details and results of this study are subject to the Limitations included in Appendix A.

During the course of this investigation, it was discovered that the office portion of the on-site building was constructed in 1975 and the maintenance garage was added in 1979. Prior to its initial development in 1975, the site was utilized as farmland as far back as 1940. Other development of the site was not found within records researched at Town offices.

Five soil borings were advanced on December 3, 1999. Groundwater monitoring wells were installed within four of the soil borings drilled. Soil and groundwater samples were collected from the borings. Free phase product was not encountered during the subsurface investigation conducted by JGI; however, Methyl-t-butyl ether (MTBE) exceeded the Enforcement Standard, and Trichloroethene (TCE) exceeded the Preventative Action Level set forth by the Vermont Department of Environmental Conservation (DEC) in one groundwater sample collected from the site.

The groundwater flow in the vicinity of the source area has been found to be west-northwest. The estimated groundwater flow velocity, coupled with the observed levels of contamination, suggest that contamination above the DEC Enforcement Standards may have the potential to migrate off site.

Based on the findings of this ISI, JGI recommends two additional rounds of sampling at the four on-site monitoring wells. If concentrations are observed to increase, the installation of two

additional downgradient monitoring wells may be recommended to better define the potential plume and hydraulic conductivity.

## 2.00 SITE DESCRIPTION

## 2.10 Property

Site Location:

3640 Shelburne Road (Route 7)

Shelburne, Chittenden County, Vermont

Site Owner:

Mr. Joseph R. Alosa, Sr.

Assessor's Ref.:

Map 26, Lot 58

Town Zoning:

Residential/Commercial

United States Geological

Survey Quadrangle:

Burlington, Vermont - 1987

Geographic Coordinates:

44° 24' 15" North Latitude

73° 13' 06" West Longitude

The site is located on the west side of Shelburne Road approximately 600 feet south of the intersection of Bay Road as shown on Figure 1. According to information obtained at the Shelburne Tax Assessor's office, the site comprises 5.1 acres with a large metal-framed building that houses office space and a truck maintenance garage, as well as paved parking. The building sets atop a slab-on-grade foundation. The site lot configuration and abutting properties are shown on Figure 2.

The site is abutted to the north by seasonal cottages, to the south by vacant residential property, to the east by an antique dealership, and to the west by residential properties. Vacant residential property utilized as farmland abuts the site to the east across Shelburne Road.

## 2.20 Hydrogeologic Setting

General site geology was researched from published information sources and is described below. Geologic information specific to the site is detailed in Section 6, Subsurface Exploration Program and Conditions Encountered.

The site elevation is approximately 150 feet above the National Geodetic Vertical Datum of 1929. The topography of the local area slopes slightly downward to the west-northwest. The site topography is generally level. A small, unnamed brook is located approximately 100 feet north of the site and flows westerly toward Lake Champlain

The Chittenden County Soil Survey (1989) maps the surficial soils at the site as Covington silty clay belonging to the Vergennes-Covington Association, which are described as level to steep, moderately well drained and poorly drained, clayey soils on located broad lake plains.

The Centennial Geologic Map of Vermont (1961) identifies bedrock in the site area as Monkton Quartzite, which is described as distinctively red quartzite interbedded with lesser buff and white quartzite, and relatively thick sections of dolomite. Bedrock outcrops are prevalent on property abutting the site to the east across Shelburne Road. Depth to bedrock ranged from 9.75 to 10.1 feet below surface grade within the borings advanced on the subject site.

## 3.00 SITE AND OWNERSHIP HISTORY

The current site owner is Mr. Joseph R. Alosa, Sr. A list of previous site owners is provided below. It should be noted that the subject site was part of a larger parcel that was subdivided in 1970 from a 9-acre parcel to a 5-acre parcel and during the 1940's was subdivided from a 15-acre parcel.

The following table summarizes the title transfers on record between 1977 and 1911.

Transferred To	Previous owner	Date	Recorded Volume	Recorded Page
Joe Alosa	Arthur & Bernard Momot and Joseph Bailey	October 1977	61	18
Momot & Bailey	General Properties, Inc.	June 1973	51	181
General Properties, Inc.	Bernard & Jeanette Roy	October 1970	45	458
Roy	Frank Brassor	July 1965	40	293
Brassor	Estate of Henry Rowley	May 1942	28	389
Henry Rowley	Erwin Rowley	March 1911	18	91

Prior to Mr. Alosa's ownership, none of the titleholders suggested an obvious use of hazardous materials.

#### 4.00 SITE RECONNAISSANCE

JGI conducted a limited site visit on December 19, 1999. It should be noted that due to access restrictions, photographs of the interior of the building and maintenance facility were not taken. The site building is located within the northern portion of the property. Paved parking surrounds the building. Grassy areas lie beyond the paved parking area. A drainage swale located within the western portion of the property was observed to be dry. The swale runs in a northerly direction toward Bay Road.

Drainage trenches were observed within the maintenance garage. These trenches are believed to discharge to an oil-water separator located along the southern exterior wall of the building. A

large area of staining was observed near the door on the western wall of the building. This area of staining appears significant and was observed to have overflowed to the ground surface above the former UST location (see Figure 3).

#### 5.00 ENVIRONMENTAL SITE HISTORY

#### 5.10 Shelburne Town Review

Information available at the Assessor's Office indicates that the office portion of the building was constructed in 1975, and the Maintenance Garage addition was constructed in 1979. Historic city directories, Sanborn Fire Insurance Maps and aerial photographs were sought for information regarding the environmental site history. Sanborn Maps were not found within the Town offices contacted. Aerial photographs reviewed were available from the Building Department. A photograph dated 1978 depicts the site as containing the initially developed office building. The 1966 photo depicts the site as vacant farmland with one residential homestead abutting the site to the east. A military aerial photograph dated 1942 was also reviewed. This photograph also depicts the site as vacant farmland.

## • Planning and Zoning Office

Records of complaints, violations, or environmental concerns regarding the subject site were not on file with this office.

## • Fire Department

A representative from the Shelburne Fire Department indicated that records of environmental incidents, USTs (underground storage tanks) or ASTs (aboveground storage tanks) were held at the State Agencies, therefore the Fire Department did not have information of known oil or hazardous material releases at the site.

#### 5.20 Vermont Department of Environmental Conservation (DEC)

#### DEC UST Facilities List

Dated 12/99: DEC lists the site as a hazardous waste facility, however no additional facilities are listed within a 0.5-mile radius of the subject site.

#### DEC UST Facilities List

Dated 12/99: The Vermont UST facilities list identified the subject site as having two USTs that were removed in November 1999. No additional facilities are listed within a 0.5-mile radius of the subject site.

## 6.00 SUBSURFACE EXPLORATION PROGRAM & CONDITIONS ENCOUNTERED

In November 1998, contamination of both soil and groundwater was discovered during the removal of two 1,000-gallon waste oil underground storage tanks (USTs) located at the rear of the property. Analysis of the soil samples submitted detected elevated concentrations of metals and BTEX compounds. Therefore, a subsurface investigation was proposed.

## 6.10 December 1999 Boring and Monitoring Well Program

Green Mountain Boring of East Barre, Vermont drilled five test borings, identified as JB-1 through JB-5, on December 13, 1999 at the approximate locations shown in Figure 3. The borings were located in the field by a stadia survey performed by JGI. The borings were advanced utilizing 4.25-inch inside diameter hollow stem augers to depths ranging from 9.75 feet to 10.10 feet below surface grade (bsg).

Soil samples were typically obtained at the surface and at 5-foot intervals with a standard 2-footlong, 2-inch outside diameter split-barrel sampler. Standard Penetration Tests were performed at sampling intervals in general accordance with ASTM D-1586. The exploration program was accomplished under the direction of a JGI representative who visually classified soil conditions encountered and screened the soil samples for Total Organic Vapors (TOVs) using a photoionization detector. Soil classification, TOV levels, and other pertinent data were recorded on the test boring logs, which are included in Appendix B.

Subsurface conditions, in the order encountered, include approximately 2.5 to 13 feet of sand and gravel fill over bedrock. Auger and spoon refusal (i.e., bedrock) were encountered in each of the boring locations at depths between of 9.75 to 10.10 feet.

Groundwater monitoring wells were installed in test borings JB-1/MW, JB-2/MW, JB-3/MW and JB-4/MW. The wells were constructed of 2-inch outside diameter PVC with the lowermost portion of the well consisting of 0.010-inch slotted well screen. The length of the screen was such that the screened portion of the well penetrated the saturated zone of the soil and extended above the apparent water table. The screened section of the well was backfilled with silica sand and sealed above the water table with a bentonite clay seal. The top of the well was completed with a protective roadbox set in a concrete surface seal to reduce the potential for surface water intrusion, vandalism, or other damage. Specific details regarding the installation of the monitoring wells are provided in the monitoring well logs included in Appendix B.

#### 6.20 Groundwater Flow

Well gauging and a stadia survey were conducted on December 19, 1999 to assign relative elevations of the monitoring wells with which to determine the hydraulic gradient. The water level data are presented in Table 2 and groundwater contours are presented on Figure 3. The depth to water was between approximately 2.80 and 3.27 feet bsg as shown on Figure 3. A west-northwesterly groundwater flow is inferred from the water level data, suggesting that site groundwater discharges to Lake Champlain.

## 6.30 Soil and Groundwater Sampling

Soil samples recovered from the test borings were screened for TOVs using the jar headspace methodology and a Thermo Environmental Instruments Model 580B organic vapor meter equipped with a 10.0 eV lamp calibrated to a benzene equivalent. This screening was undertaken to evaluate the potential for the presence of volatile organic compounds (VOCs) in site soils. Results are recorded on the test boring logs included in Appendix B and show that detectable concentrations of TOVs, (i.e., concentrations greater than 0.1 part per million [ppm]) were measured during the field screening. A representative soil sample from the water table was collected from test borings JB-4/MW and JB-5/MW and submitted to Aquarian Analytical, Inc. (AAI) of Canterbury, New Hampshire for the analysis of VOCs and Total Petroleum Hydrocarbons (TPHs) via EPA Methods 8240 and 8100, respectively. The soil analytical results are presented as Table 3.

The analytical results of the soil samples show concentrations of TPHs in JB-4/MW (470 ppm) and JB-5 (4,400 ppm). DEC has not established cleanup levels or regulatory standards for TPHs in soil. The data indicate that low levels of Naphthalene (1.080 ppm) and 1,2,4 Trimethylbenzene (0.464 ppm) are present within the soils submitted for analysis from JB-4/MW. The sample was taken at a depth of 7 feet bsg. It should be noted that this soil sample was taken in the center of the former tank location below the area where clean fill was placed, which could account for the presence of VOCs.

The compounds n-Butylbenzene (0.789 ppm), p-Isopropyltoluene (0.467 ppm), 1,2,4 Trimethylbenzene (1.600 ppm), 1,3,5 Trimethylbenzene (1.560 ppm) and m&p-Xylene (0.807 ppm) were detected within a soil sample obtained from a depth of 2 feet bsg in JB-5. This soil sample was also submitted for analysis of Resource Conservation Recovery Act (RCRA) metals. Arsenic (1.8000 ppm), Barium (39.0000 ppm), Chromium (9.6000 ppm) and Lead (13.0000 ppm) were detected. The area from which this sample was obtained was significantly stained and may be the result of a spill that appears to have occurred near the interior wall of the maintenance garage.

Groundwater samples were obtained from the four monitoring wells on December 19, 1999. Groundwater parameters including depth to groundwater, temperature, pH, and appearance were recorded for each well prior to sampling and are summarized in Table 2. Prior to sampling, three to five volumes of water were purged from the wells to allow a fresh influx of groundwater, thus providing a more representative sample. A groundwater sample from each monitoring well was submitted, under proper chain-of-custody documentation, to AAI for analysis of VOC and TPH by EPA Method 8260/8100 respectively. Analysis for the 8 RCRA metals was performed only from the sample obtained from JB-4/MW. The groundwater analytical results are presented as Table 4.

The analytical results of the groundwater samples showed detectable concentrations of several VOCs. However, MTBE (83 parts per billion [ppb]) exceed Vermont's Enforcement Standard,

and Trichloroethene (TCE) (4 ppb) exceeds the Preventative Action Level. A copy of the AAI report is included in Appendix C.

## 7.00 POTENTIAL ENVIRONMENTAL RECEPTORS

Potential environmental receptors were identified from a November 23, 1999 site reconnaissance, and review of local records and topographic maps. Potential receptors within a 500-foot radius of the subject site are identified on Table 1 and shown on Figure 2. The nearest residences were observed to abut the site to the north and west across Bay Road. The nearest basement is located at a residential dwelling across Bay Road. The Town of Shelburne provides local drinking water. Public water supply wells are located approximately 2.5 miles west and upgradient of the subject site. Private drinking water wells are not known to exist at the site or on abutting or adjacent properties. The nearest and most significant sensitive environmental receptor is Lake Champlain, which is located approximately 800 feet west and downgradient of the subject site.

Oil and hazardous materials currently being used at the site include petroleum products (e.g., fuel oil, waste oil, motor oil, and gasoline), automobile fluids (e.g., antifreeze, brake and power steering fluid), and organic solvents. Petroleum hydrocarbons are readily biodegradable and susceptible to weathering (degradation), while chlorinated solvents such as TCE are more resistant to degradation and, thus, are more persistent in the environment. Solvent compounds are also heavier than water and in the environment will concentrate along confining layers or in fracture zones of the bedrock.

The fact that the site groundwater contamination exceeds Enforcement Standards for MTBE and the Preventative Action Level for TCE at JB-3/MW, and that the groundwater table is relatively shallow suggests a potential risk to the indoor air quality of the maintenance garage. However, groundwater was determined to flow away from the site building, therefore minimizing the threat of indoor air quality. Thus, indoor air quality is not considered a concern at this time.

## 8.00 CONCEPTUAL HYDROGEOLOGIC MODEL

A release of petroleum at the site was reported in November 1998 during the removal/closure of two USTs on the site. Field screening and laboratory data indicated the release of petroleum hydrocarbons and VOCs associated with the storage of waste oil.

The depth to groundwater was measured on December 19, 1999 and was found to be between approximately 2.80 to 3.09 feet bsg. Groundwater flow is in a west-northwesterly direction with an approximate gradient of  $1.4 \times 10^{-2}$ . The hydraulic conductivity of the soils at the site is expected to be between  $10^{-3}$  to  $10^{-5}$  centimeters per second (cm/s). Assuming a porosity of 0.2 and using the calculated hydraulic gradient of  $1.4 \times 10^{-2}$ , the predicted average groundwater flow rate at the site is between 0.72 and 72 feet per year depending on the conductivity value.

The suspected sources of contamination at the site are residual petroleum-contaminated soils in the former UST area located on the west side of the garage and possibly spills originating from within the garage, which migrated out of the access door on the western side of the building. The vertical extent of soil contamination appears to be limited based on the results of the field screening.

The soil-adsorbed petroleum constituents at the source area are transferred to groundwater via leaching processes. Ambient groundwater flow would transport the dissolved contaminants downgradient, thereby creating a plume of groundwater contamination. The presence of residual petroleum in soil at the location of the former UST locations appears to be serving as a continued source of groundwater contamination.

Groundwater quality data obtained from JB-3/MW indicate that the MTBE concentration exceeds the Enforcement Standard and TCE exceeds the Preventative Action Level.

The available sampling points and analytical data did not define the downgradient extent of the contaminant plume. Based on the available data, it cannot be determined if the contaminant plume in excess of the state's standards has migrated off-site. The effect of natural attenuation has not been assessed at this time, but would pose as a likely option for the site. Based on a west-northwesterly groundwater flow direction, the nearest downgradient off-site receptors identified include nearby residences.

## 9.00 CONCLUSIONS

JGI has completed an ISI of the property located at 3640 Shelburne Road in Shelburne, Vermont. The study consisted of a site reconnaissance, research regarding the environmental history of the site and surrounding area, performance of a stadia survey, the advancement of five test borings and the installation of four monitoring wells, and the laboratory analysis of two soil and four groundwater samples. Subject to the report Limitations (Appendix A), the following findings are presented:

- The site building was constructed in 1975 and is currently utilized as office space and a tractor-trailer maintenance facility. Oil and hazardous materials currently being used at the site include petroleum products (fuel oil, diesel fuel, waste oil, motor oil, various lubricants and gasoline), automobile fluids (antifreeze, brake and power steering fluid).
- Free product was not encountered during the subsurface explorations conducted during this investigation. The laboratory analysis of soil samples indicated between 470 ppm and 4,400 ppm TPHs. DEC has not established cleanup levels or regulatory standards for TPHs in soil. VOCs were detected in the soil and groundwater samples collected from the site, however only the compounds MTBE and TCE exceeded the Enforcement Standards and Preventative Action Level, respectively. Field screening of the soils during the

time the borings were advanced showed TOVs ranging from 0 ppm to 158 ppm. The most significant reading was detected within JB-5.

- Groundwater flow in the vicinity of the source area is to the west-northwest.
   This flow pattern, coupled with the observed levels of contamination suggests that contamination may have the potential to migrate off site.
- Potential receptors identified within 500 feet downgradient of the site include residences (indoor air quality), and ultimately Lake Champlain.

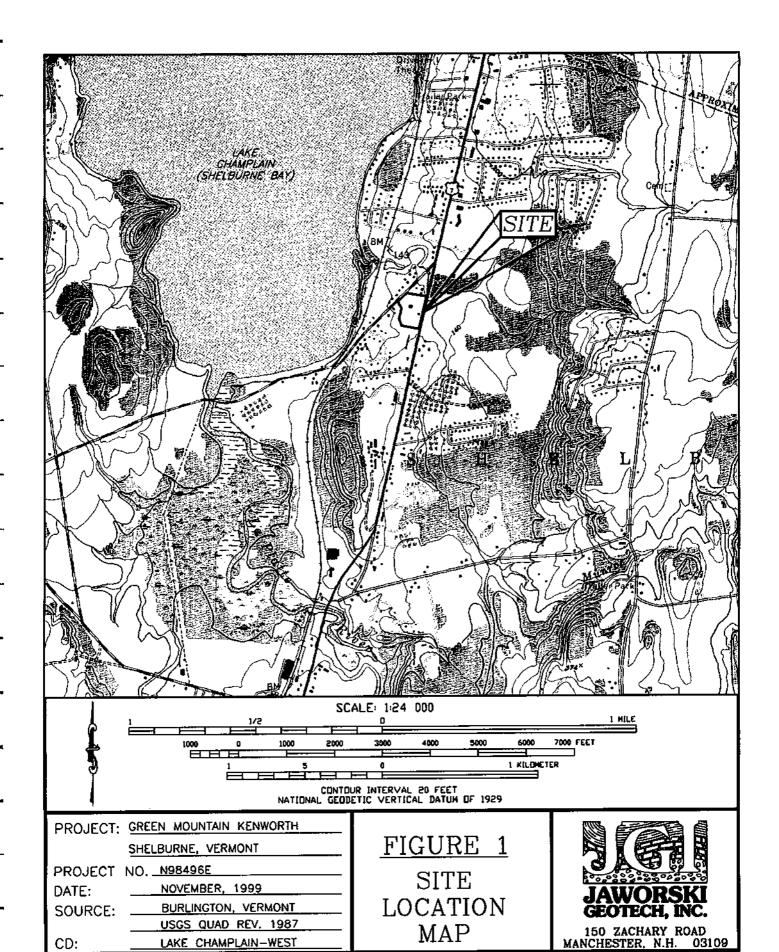
Based on the environmental conditions and the site conceptual model, JGI recommends the following:

- Two additional groundwater sampling rounds (March and July) for monitoring wells JB-1/MW, JB-2/MW JB-3/MW and JB-4/MW. If concentrations increase at JB-3/MW, JGI suggests the installation of two additional test borings/monitoring wells; one northwest of the building and one along the property boundary near Bay Road.
- 2. Natural attenuation of contaminants in groundwater should be evaluated by measuring dissolved oxygen *in-situ* and analyzing nitrate, sulfate, dissolved iron, and alkalinity in the laboratory.
- 3. The site conceptual model should be refined based on the additional hydrogeologic and analytical information. Additionally, the fate and transport of the contaminants should be evaluated through the use of a groundwater model to assess the potential risk to the downgradient properties identified above.

Nα

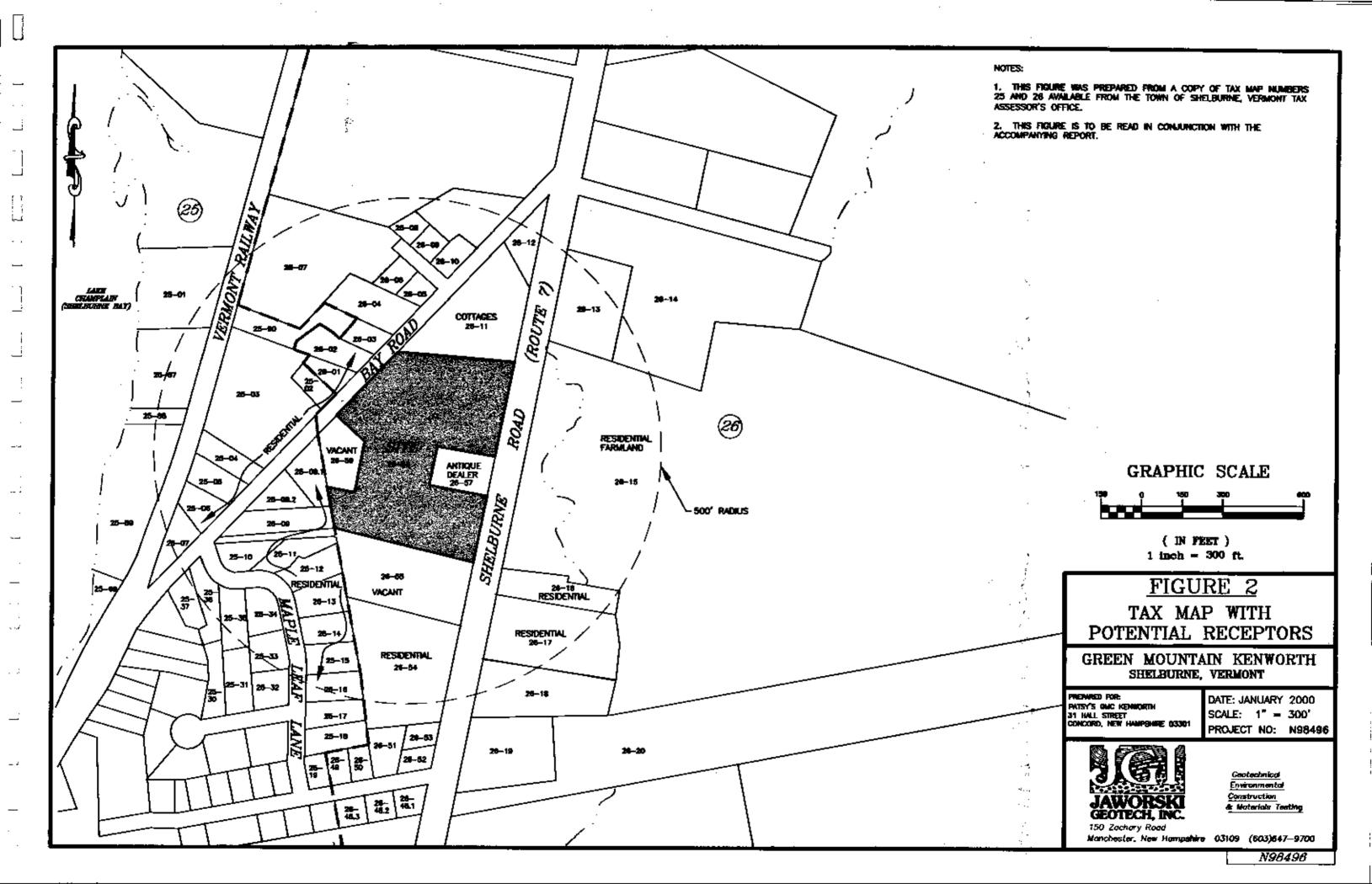
4. A Corrective Action Plan should be prepared to evaluate remedial alternatives for the site and present the results of the additional analyses. Contaminated soils removal from the former UST area is one feasible option. Other source control remedial options to be considered include *in-situ* biodegradation.

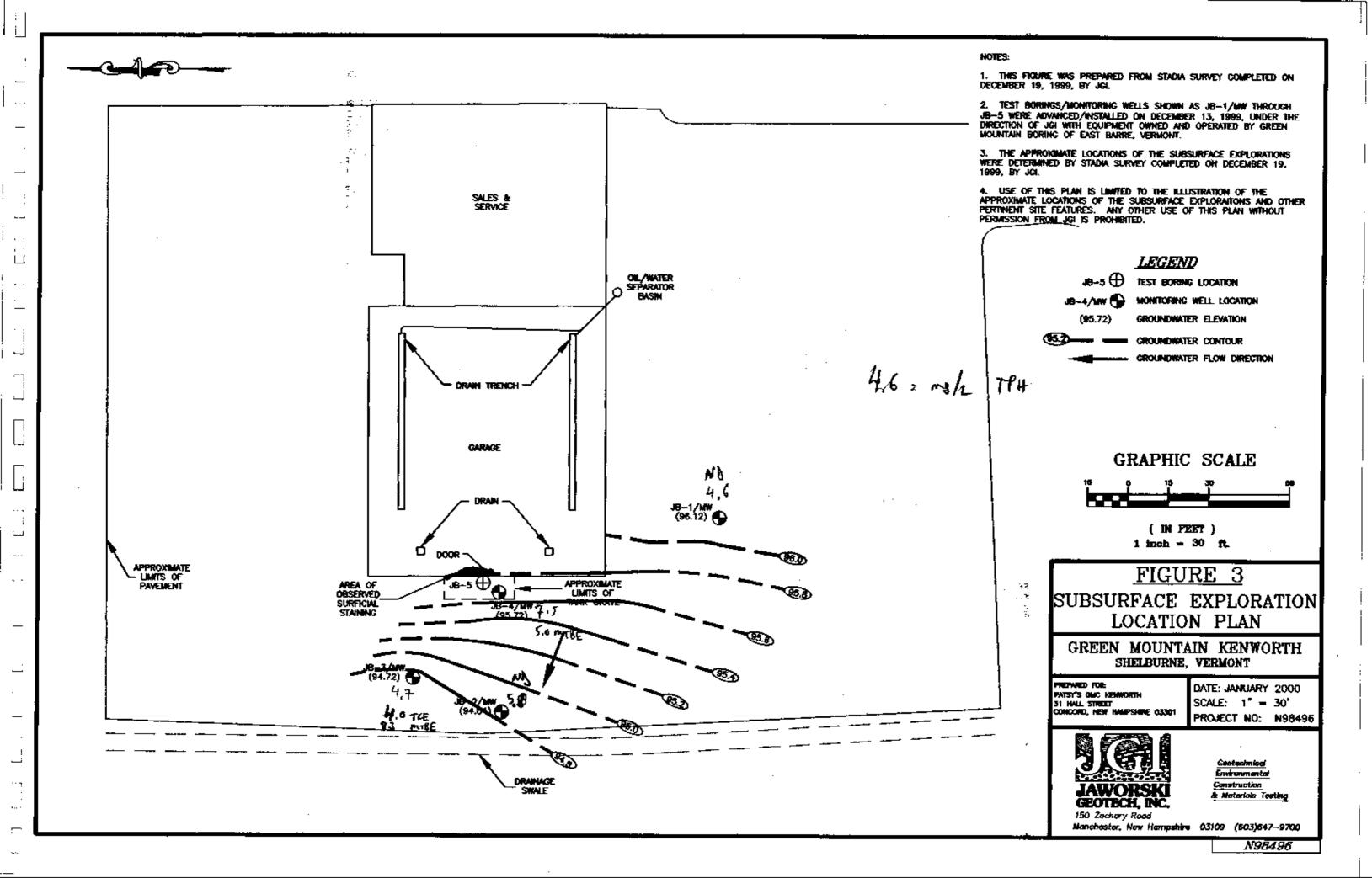
Remedial options to consider for the mitigation of the dissolved-phase contamination plume include air sparging, hydraulic containment using pump and treat technologies, enhanced biodegradation, or natural attenuation.



LAKE CHAMPLAIN-WEST

CD:





## TABLE 1

Green Mountain Kenworth Shelburne, Vermont Project No. N98496E

# Potential Receptors Within 500 Feet

Page 1 of 2

_	Map/Lot	Owner's Name and Address			
	26-01.000	Robert D. Seymour, 216 Bay Road, Shelburne, VT 05751			
_	26-02.000	Suzanne Fay, 204 Bay Road, Shelburne, VT 05751			
	26-03,000	Ann and Kathryn L. Carr, 176 Bay Road, Shelburne, VT 05751			
	26-01.000	Louis and Jane Kirsch, 156 Bay Road, Shelburne, VT 05751			
	26-05.000	Jeffrey Bennett, 17 Crown Road, Shelburne, VT 05751			
	26-06.000	Daniel and Jill Lamonthe, 35 Crown Road, Shelburne, VT 05751			
	26-07.000	Town Sewer Plant (FD#1), 73 Crown Road, Shelburne, VT 05751			
	26-08.000	Elaine Shortsleeve, 44 Crown Road, Shelburne, VT 05751			
	26-09.000	Ryszard Kabicki, 36 Crown Road, Shelburne, VT 05751			
_	26-50.10.000	Michael and Joyce Stowell, 20 Crown Road, Shelburne, VT 05751			
	26-11,000	Sisters and Brothers, 3530 Shelburne Road, Shelburne, VT 05751			
	26-50.12.000	Betty Cheng, 3426 Shelburne Road, Shelburne, VT 05751			
_	26-13.000	Lot and Betty Cheng, 3455 Shelburne Road, Shelburne, VT 05751			
	26-14.000	Lot and Betty Cheng, 84 Executive Drive, Shelburne, VT 05751			
	26-15.000	Dolan Properties, 2000 Shelburne Road, Shelburne, VT 05751			
_	26-16.000	William Coates, III, 3689 Shelburne Road, Shelburne, VT 05751			
	26-17.000	William Coates, III, 3725 Shelburne Road, Shelburne, VT 05751			
_	16-18.000	Clark Hinsdale, 3761 Shelburne Road, Shelburne, VT 05751			
	26-54.000	Evan Metropoulos, 3762 Shelburne Road, Shelburne, VT 05751			
	26-55.000	Modern Design, 2009 Shelburne Road, Shelburne, VT 05751			
:	26-67.000	David and Janie Duchaine, 3614 Shelburne Road, Shelburne, VT 05751			
	26-58-000	Joseph Alosa, 3640 Shelburne Road, Shelburne, VT 05751			
	26-59.000	Joseph and Carol Alosa, 253 Bay Road, Shelburne, VT 05751			
<del></del>	25-01.000	Neal and Andrea Kofman, 86 Mariners Cove, Shelburne, VT 05751			
	25-02.000	Sun Pointe Properties, Inc., 230 Bay Road, Shelburne, VT 05751			
_	25-03,000	Small Meadows Condo, 1 Edward Drive, Shelburne, VT 05751			
	25-50.04.000	Stephen Baietti, 322 Bay Road, Shelburne, VT 05751			
	25-05.000	Arthur and Virgina Merchant, 346 Bay Road, Shelburne, VT 05751			
	25-06,000	Jeffrey and Barbara Noyes, 376 Bay Road, Shelburne, VT 05751			
	25-07.000	Rinald and Beatrice Precourt, 23 Bay Road, Shelburne, VT 05751			
	25-08.100	Vivian and Bonson Ho, 281 Bay Road, Shelburne, VT 05751			
_					

# TABLE 1

Green Mountain Kenworth Shelburne, Vermont Project No. N98496E

# Potential Receptors Within 500 Feet

Page 2 of 2

	Map/Block/Lot	Owner's Name and Address
•	25-08,200	Vivian and Bonson Ho, 6 Bay Road, Shelburne, VT 05751
	25-09.000	John and Jeannine Welsh, 341 Bay Road, Shelburne, VT 05751
_	25-10.000	Thomas Garrett, 11 Bayfield Drive, Shelburne, VT 05751
	25-11.000	James and Annie R. Hal, 57 Bayfield Drive, Shelburne, VT 05751
	25-12.000	Will and Cinda Vinci, 63 Bayfield Drive, Shelburne, VT 05751
-	25-13.000	Patrick and Gena DiDomenico, 79 Bayfield Drive, Shelburne, VT 05751
	25-14.000	Albert and Janine Kilburn, 976 Bayfield Drive, Shelburne, VT 05751
	25-15.000	George and Robin Eliwood, 115 Bayfield Drive, Shelburne, VT 05751
-	25-16.000	Patrick and Caroline Slater, 131 Bayfield Drive, Shelburne, VT 05751
	25-17,000	Frederick and Jeannie Pflum, 149 Bayfield Drive, Shelburne, VT 05751
_	25-31.000	Holt, John, Conner & Farrell, 34 Bayview Lane, Shelburne, VT 05751
	25-32.000	David Zullo, 130 Bayfield Drive, Shelburne, VT 05751
	25-33.000	Jonathan Mayette, 110 Bayfield Drive, Shelburne, VT 05751
-	25-34.000	Richard Parent, 66 Bayfield Drive, Shelburne, VT 05751
	25-35.000	Gary and Harriet Mace, 32 Bayfield Drive, Shelburne, VT 05751
	25-36.000	Raymond Precourt, 18 Bayfield Drive, Shelburne, VT 05751
-	25-37.000	Randy Shover, 399 Bay Road, Shelburne, VT 05751
	25-87.000	Robert L. Morse Trusts, 122 Mariners Cove, Shelburne, VT 05751
_	25-88.000	Robert Cooper, 5A Mariners Cove, Shelburne, VT 05751
	25-89.000	Robert F. Cooper Trust, 176 Mariners Cove, Shelburne, VT 05751
	25-90.000	Robert K. Furrer, 42 Mariners Way, Shelburne, VT 05751

1/19/2000

# TABLE 2

# MONITORING WELL FIELD GROUNDWATER MEASUREMENTS

PROJECT: Green Mor		Green Mountain Kenworth		CLIENT:		Patsy's GMC-Kenworth				
Shelburne, Verr		Vermont		_		Concord, NH				
PROJEC'	T NO.:	N98496E			WEATHE	R:	Sunny,	30's		
DATE:		December	19, 1999		INSTRUM	ENT(S):	Water L	evel In	dicator, pH,	Temp. Meter
TECHNI	CIAN:	Ryan Roy			•		4 Dispo	sable E	Bailers.	
WELL	WELL ELEV.	DEPTH TO WTR	DEPTH TO	WTR TBL ELEV.	DEPTH OF WELL	WATER COLUMN	темр.		SPECIFIC CNDUCT.	
NO.	(FT.)	(FT.)	(FT.)	(FT.)	(FT.)	(FT.)	(F)	рН	(ppt)	APPEARANCE
JB-1/MW	99.19	3.07	NA	96.12	9.25	6.18	48.7	7.2		Cloudy
JB-2/MW	97.64	2.80	ÑΑ	94.84	9.50	6.70	48.3	7.0		Cloudy
JB-3/MW	97.81	3.09	NA	94.72	9.10	6.01	18.6	7.0		Cloudy
JB-4/MW	99.49	3.77	NA	95.72	9.60	5.83	48.7	7.1		Cloudy
;										
				· • •						
NA - not applicable; proudct not encountered.  1/18/2000										

TABLE 3

Green Mountain Kenworth Shelburne, Vermont Project No. N98496E

## Soil Analytical Results

Compound	<u>JB-4/SS-3</u>	<u>JB-5/SS-1</u>
VOCs:		
<del></del>	< 0.200	0.789
n-Butylbenzene		
Naphthalene	1.080	< 0.600
1,2,4- Trimethylbenzene	0.464	1.600
1,3,5-Trimethylbenzene	< 0.200	1.560
p-Isopropyltoluene	< 0.200	0.467
Total Xylenes	<0.400	0.807
ТРН:	470.0	4,400.0
Total Metals:		
Arsenic	NT	1.8000
Barium	NT	39.0000
Chromium	NT	9.6000
Lead	NT	13.0000

## Notes:

All results reported in parts per million (ppm).

NT: Not Tested.

TPH: Total petroleum hydrocarbons.

VOCs: Volatile organic compounds.

 $\leq$  = less than

1/19/2000

TABLE 4

Green Mountain Kenworth
Shelburne, Vermont
Project No. N98496E

## **Groundwater Analytical Results**

Compound	<u>JB-1/MW</u>	JB-2/MW	<u>JB-3/MW</u>	<u>JB-4/MW</u>	Enforcement Standard	Preventive Action Level
VOCs: (ppb)						
n-Butylbenzene	<2	<2	<2	<2	NS	NS
Naphthalene	<4	<4	<4	<4	20.0	10.0
1,2,4- Trimethylbenzene	<2	<2	<2	<2	5.0	2.5
1,3,5-Trimethylbenzene	<2	<2	<2	<2	4.0	2.5
p-Isopropyltoluene	<2	<2	<2	<2	NS	NS
Total Xylenes	<4	<4	<4	2	10,000.0	5,000.0
Trichloroethene	<2	<2	4	<2.0	5.0	0.5
Methyl tertiary butyl ether	<2	<2	83	5	40.0	20.0
TPHs: (ppm)	4.60	5,80	4.70	7.50	NS	NS
Total Metals: (ppb)						
Arsenic	NT	NT	NT	1.0	50.0	5.0
Barium	NT	NT	NT	85.0	2,000.0	1,000.0
Chromium	NT	NT	NT	8.0	100.0	50.0
Lead	NT	NT	NT	<2	15.0	5.0

#### Notes:

ppb = parts per billion ppm = parts per million

< = less than

NT - Not Tested.

TPH: Total petroleum hydrocarbons VOC: Volatile organic compounds.

NS - No standard established.

1/20/2000

**Bold** - indicates that constituent is above the Enforcement Standard or the Preventative Action Level.

## LIMITATIONS

- 1. Analytical tests performed in the field and in the laboratory were done for the purpose of identifying the likelihood that hazardous wastes exist beneath the site. Analytical tests were not completed for every compound on the Environmental Protection Agency list of priority pollutants, nor was the entire site explored for the purpose of revealing a potential problem. Explorations were widely spaced, thus it is possible that hazardous materials may be present beneath unexplored areas of the site.
- 2. The analyses and conclusions in this report are based in part upon chemical test data provided by others and are contingent upon their validity. Should additional chemical analyses indicate different evidence of contamination, these data should be reviewed by Jaworski Geotech, Inc. (JGI) and the conclusions presented herein may be modified. It should be noted that variations in the type of contaminants, their concentrations, and their direction of flow will occur due to water table fluctuations and alteration of disposal practices, as well as other factors. As such, it cannot be stated with absolute certainty whether or not a hazardous waste contamination problem exists or will exist in the future at the site.
- 3. This study and report have been prepared for the exclusive use of Joesph R. Alosa Sr., President, Patsy's GMC-Kenworth and their Lender and Title Insurer associated with the site solely for the use of an evaluation of the site. Except for the purpose of satisfying federal, state, and local regulations, this report and the findings contained herein shall not, in whole or part, be disseminated or conveyed to any other party, nor used by any other party, in whole or in part, without prior written consent of IGI. This report has been prepared in accordance with generally accepted environmental assessment practices. No other warranty, expressed or implied, is made.

SAMPLER SHEET 1 OF 1 PROJECT NAME: Green Mountain Kenworth SS BORING NO: JB-1/MW LOCATION: Shelburne, Vermont TYPE: HSA LOCATION: See Plan 2" OD PROJECT NO .: N98496 SIZE: 4 1/4 "ID December 13, 1999 HAMMER FALL DATE START: 30° SURFACE EL: DATE END: December 13, 1999 140 lbs. GROUNDWATER OBSERVATIONS Green Mountain Boring BORING CO.: STABILIZATION PERIOD CASING AT DEPTH CO. LOCATION: Barre, Vermont 12/13/99 FOREMAN: Rod Ganeir none observed JGI REP: Ryan Roy

JUL KI	<del>7</del> ₹:₹.	K	yan Kuy				
			SAMPLIN		Sample	Stratum	PID/OVM
Depth		Depth	<u>.</u>	Penetration/	-	Change (ft.)	Readings
(ft.)	No.	(ft.)	Blows/6"	Recovery (in.)		(not to scale)	(1)
					ASPHALT.	0.3	
	SS-1	1-3	17-15	24/6	SS-1: Medium dense, white/grey, coarse to fine SAND,		0
			10-7		some Gravel, little Silt.	3.0	
	SS-2	3-5	5-10	24/7	SS-2: Medium dense, brown, medium to fine SAND,		0
5			15-15	<u> </u>	and Silt, little Gravel, wet.		
	SS-3	5-7	9-9	24/19	SS-3: Similar to SS-2.		0
			24-3				
	<b>SS-4</b>	7-8	30-55	12/12	SS-4: Similar to SS-2.		0
			50/0				
10				<u> </u>	Auger refusal. Exploration terminated - 9.75'. Monitoring		
					well installed.		
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NOTES:

(1) As referenced to benzene using Thermo Environmental Organic Vapor Meter (OVM) Model 580B with 10.0 eV lamp, reported in parts per million.



KI	

	Proportions used:	trace (1-10%),	little (10-20%),	some (20-35%),	and (35-50%)
Cohesive Consider	stency (Blows/ft.)		Çoh	esionless Relative D	ensity (Blows/ft
very soft	0-2		very	loose	0-4
soft	2-4		loos	e é	4-10
medium stiff	4-8		med	ium dense	10-30
stiff	8-15		dens	ie :	30-50
very stiff	15-30		very	dense	50+
hard	30+				

Remarks: The stratification lines represent the approximate boundary between materials and the transition may be gradual. Water level readings have been made in the drill holes at times and under conditions stated on the boring logs. Fluctuations in the groundwater may occur due to other factors than those presented at the time measurements were made.

			10 200		
PROJECT NAME:	Green Mountain Kenworth	5.55	CASING	SAMPLER	SHEET 1 OF 1
LOCATION:	Shelburne, Vermont	TYPE:	ASA	SS	BORING NO: JB-2/MW
PROJECT NO.:	N98496	SIZE:	4 1/4 "ID	2" OD	LOCATION: See Plan
DATE START:	December 13, 1999	1 %	HAMMER	FALL	
DATE END:	December 13, 1999		140 lbs.	30"	SURFACE EL:
BORING CO.:	Green Mountain Boring		GROUNDY	VATER OBSERV	ATIONS
CO. LOCATION:	Barre, Vermont	DATE	DEPTH	CASING AT	STABILIZATION PERIOD
FOREMAN:	Rod Ganeir	12/13/99	5.0'		none
JGI REP:	Ryan Roy				

			SAMPLING		Sample Stratum	PID/OVM
Depth		Depth		Penetration/	Description Change (for	
(ft.)	No.	(ft.)	Blows/6"	Recovery (in.)	(not to sca	e) (1)
					ASPHALT. 0.3	
	SS-1A	1-1.25	10-15	24/8	SS-1A: Dense, white, coarse to fine SAND, and	0
	SS-1B	1.25-3	16-6		Gravel, little Silt,. 1.25	
	SS-2	3-5	16-18	24/13	SS-1B: Dense, brown, medium to fine SAND, and	0
5			23-23		Silt, little Gravel.	
	SS-3	5-7	6-12	24/19	SS-2: Similar to SS-1B.	O
			23-44		SS-3: Similar to SS-1B.	0
10					Auger refusal. Exploration terminated - 9.75'.	
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NOTES:

(1) As referenced to benzene using Thermo Environmental Organic Vapor Meter (OVM) Model 580B with 10.0 eV lamp, reported in parts per million.



·	Proportions used:	trace (1-10%),	tiule (10-20%),	some (20-35%),	and (35-50%)
Cohesive Consi	stency (Blows/ft.)		Coh	esionless Relative [	Density (Blows/ft.)
very soft	0-2		very	loose	0-4
soft	2-4		loos	c	4-10
medium stiff	4-8		med	ium dense	10-30
stiff	8-15		dens	e	30-50
very stiff	15-30		very	dense	50+
hard	30+				
Demonstrate The	at a Constanting times come	cont the conserving	ua kaundami katura	on materials and th	a transition may be a

Remarks: The stratification lines represent the approximate boundary between materials and the transition may be gradual.

Water level readings have been made in the drill holes at times and under conditions stated on the boring logs. Fluctuations in the groundwater may occur due to other factors than those presented at the time measurements were made.

	* -	OI DOILL	OBOO		
CT NAME:	Green Mountain Kenworth		CASING	SAMPLER	SHEET 1 OF 1
TION:	Shelburne, Vermont	TYPE:	HSA	SS	BORING NO: JB-3/MW
CT NO.:	N98496	SIZE:	4 1/4 "ID	2" OD	LOCATION: See Plan
START:	December 13, 1999	and the state of t	HAMMER	FALL	
END:	December 13, 1999		140 lbs.	30 <sup>rl</sup>	SURFACE EL:
G CO.:	Green Mountain Boring	gir ferigir	GROUNDW	ATER OBSERV	ATIONS
OCATION:	Barre, Vermont	DATE	DEPTH	CASING AT	STABILIZATION PERIOD
MAN:	Rod Ganeir	12/13/99	none observed		

SS-3 5-7 13-11 24/24 5 37-46 5 SS-4 10-10.1 50/1" 1/1	ASPHALT.	( t t l - \	Readings
SS-1B 1.5-3 14-15 SS-2 3-5 8-8 24/10 5 10-12 SS-3 5-7 13-11 24/24 5 37-46 5 SS-4 10-10.1 50/1" 1/1		(not to scale)	(1)
SS-1B 1.5-3 14-15 SS-2 3-5 8-8 24/10 5 10-12 SS-3 5-7 13-11 24/24 5 37-46 5 SS-4 10-10.1 50/1" 1/1		0.3	
SS-2 3-5 8-8 24/10 S 10-12 SS-3 5-7 13-11 24/24 S 37-46 SS-4 10-10.1 50/1" 1/1	SS-1A: Medium dense, white, coarse to fine SAND		0
SS-4 10-10.1 50/1" 1/1	and Gravel, little Silt.	1.5	
SS-3 5-7 13-11 24/24 5 37-46 5 SS-4 10-10.1 50/1" 1/1	SS-1B: Medium dense, brown, medium to fine		0
SS-4 10-10.1 50/1" 1/1	SAND, little Graveł, moist.		
SS-4 10-10.1 50/1" 1/1	SS-2: Similar to SS-1B.	•	0
SS-4 10-10.1 50/1" 1/1	SS-3: Similar to SS-1B, except dry.		0
SS-4 10-10.1 50/1" 1/1			
	SS-4: Very dense, red ROCK.		0
	Auger refusal. Exploration terminated - 10.1'. Monitoring well		
	installed.		
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As referenced to benzene using Thermo Environmental Organic Vapor Meter (OVM) Model 580B with 10.0 eV lamp, reported in parts per million.



Ryan Roy

	Proportions used:	trace (1-10%),	little (10-20%),	some (20-35%),	and (35-50%)
Cohesive Consis	stency (Blows/ft.)		Cohe	sionless Relative D	ensity (Blows/ft.)
very soft	0-2		very	loose (	)-4
soft	2-4		loose	,	F-10
medium stiff	4-8		medi	um dense	10-30
suff	8-15		dens	e 3	30-50
very stiff	15-30		very	dense 5	50+
hard	30+				

Remarks: The stratification lines represent the approximate boundary between materials and the transition may be gradual. Water level readings have been made in the drill holes at times and under conditions stated on the boring logs. Fluctuations in the groundwater may occur due to other factors than those presented at the time measurements were made.

			10 200			
PROJECT NAME:	Green Mountain Kenworth	de B	CASING	SAMPLER	SHEET 1 OF 1	
LOCATION:	Shelburne, Vermont	TYPE:	HSA	22	BORING NO: JB-4/MW	
PROJECT NO.:	N98496	SIZE:	4 1/4 "ID	2" OD	LOCATION: See Plan	
DATE START:	December 13, 1999	Programme Coloresco	HAMMER	FALL		
DATE END:	December 13, 1999		140 lbs.	30"	SURFACE EL:	
BORING CO.;	Green Mountain Boring	GROUNDWATER OBSERVATIONS				
CO. LOCATION:	Barre, Vermont	DATE	DEPTH	CASING AT	STABILIZATION PERIOD	

none observed

12/13/99

FOREMAN: Rod Ganeir
JGI REP: Ryan Roy

			SAMPLING			Sample	Stratum	PID/OVM
Depth (ft.)	No.	Depth (ft.)	Blows/6"	Penetration/ Recovery (in.)		Description	Change (ft.) (not to scale)	Readings (1)
	SS-1A	0-1	3-5	24/2	SS-1A:	CRUSHED STONE.	1.0	0
	SS-1B	1-2	6-2		\$\$-1B:	Loose, ian, coarse to fine SAND, some Gravel,		
					]	little Silt, dry.		
	SS-2	3-5	6-2	24/10	SS-2:	Loose, brown, medium to fine SAND, some Silt, little		23
5			2-2	<del></del>	]	Gravel, moist.		
	SS-3	5-7	9-8	24/6	SS-3:	Medium dense, brown, medium to fine SAND, some		45
<u> </u>			10-15		1	Silt, little Gravel, wet.		
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			ļ.		Explorat	ion terminated - 10.0°. Monitoring well installed.		
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NOTES:

(1) As referenced to benzene using Thermo Environmental Organic Vapor Meter (OVM) Model 580B with 10.0 eV lamp, reported in parts per million.



· ·	Proportions used:	trace (1-10%),	little (10-20%),	some (20-35%),	and (35-50%)
Cohesive Cons	sistency (Blows/ft.)		Coh	esionless Relative D	ensity (Blows/ft.)
very soft	0-2		very	loose 0	1-4
soft	2-4		loose	<b>:</b> 4	-10
medium stiff	4-8		пedi	um dense 1	0-30
stiff	8-15		dens	e 3	0-50
very stiff	15-30		very	dense 5	+0
hard	30+				
D. Tri		cont the consequing	ata bassadami batisia	on magniple and the	tenneition may be

Remarks: The stratification lines represent the approximate boundary between materials and the transition may be gradual.

Water level readings have been made in the drill holes at times and under conditions stated on the boring logs. Fluctuations in the groundwater may occur due to other factors than those presented at the time measurements were made.

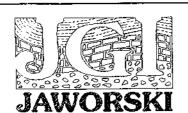
SAMPLER PROJECT NAME: Green Mountain Kenworth SHEET 1 OF 1 TYPE: HSA BORING NO: JB-5 LOCATION: Shelburne, Vermont SS 2" OD LOCATION: See Plan PROJECT NO.: N98496 SIZE: 4 1/4 "ID DATE START: December 13, 1999 HAMMER FALL 140 lbs. 30" SURFACE EL: December 13, 1999 DATE END: GROUNDWATER OBSERVATIONS BORING CO.: Green Mountain Boring STABILIZATION PERIOD DEPTH CASING AT CO. LOCATION: Barre, Vermont DATE

FOREMAN: Rod Ganeir 12/13/99 none observed
JGI REP: Ryan Roy

JGLK			Cyan Kuy				
erios or orași or orași	:		SAMPLING	Penetration/	Sample Description	Stratum Change (ft.)	PID/OVM Readings
Depth		Depth	D1/CII		Description	(not to scale)	(1)
(ft.)	No.	(ft.)	Blows/6"	Recovery (in.)			(1/
					CRUSHED STONE.	1.0	
	\$\$-!	1-3	2-3	27/2"	SS-1: Loose, brown, medium to fine SAND, some Silt,		158
			2-5		little Gravel, moist.		
					Exploration terminated - 3.0'.		
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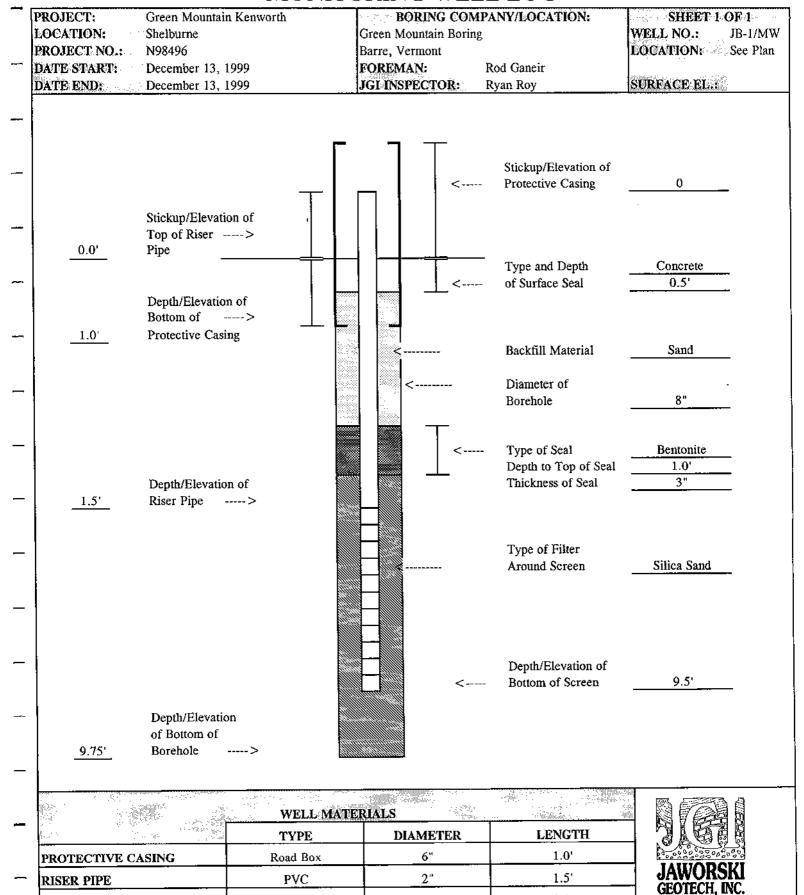
NOTES:

(1) As referenced to benzene using Thermo Environmental Organic Vapor Meter (OVM) Model 580B with 10.0 eV lamp, reported in parts per million.



	Proportions used:	trace (1-10%),	little (10-20%),	some (20-35%),	and (35-50%)
Cohesive Consi:	stency (Blows/ft.)		Cohe	sionless Relative D	ensity (Blows/ft.)
very soft	0-2		very	loose 0	<b>)-4</b>
soft	2-4		loose	: 4	-10
medium stiff	4-8		medi	um dense 1	0-30
stiff	8-15		dense	<u>.</u>	0-50
very stiff	15-30		verv	dense 5	50+
hard	30+		. ,		

Remarks: The stratification lines represent the approximate boundary between materials and the transition may be gradual. Water level readings have been made in the drill holes at times and under conditions stated on the boring logs. Fluctuations in the groundwater may occur due to other factors than those presented at the time measurements were made.



2"

**PVC** 

WELL SCREEN

8.0'

BORING COMPANY/LOCATION: PROJECT: Green Mountain Kenworth SHEET 1 OF 1 LOCATION: Shelburne Green Mountain Boring WELL NO.: JB-2/MW PROJECT NO .: N98496 Barre, Vermont LOCATION: See Plan Rod Ganeir DATE START: December 13, 1999 FOREMAN: SURFACE EL.: DATE END: December 13, 1999 JGI INSPECTOR: Ryan Roy Stickup/Elevation of Protective Casing 0 Stickup/Elevation of Top of Riser ----> 0.01 Pipe Type and Depth Concrete 0.5 of Surface Seal Depth/Elevation of Bottom of 1.0' Protective Casing Backfill Material Sand Diameter of 8" Borehole Type of Seal Bentonite Depth to Top of Seal 1.01 Thickness of Seal 3" Depth/Elevation of Riser Pipe 1.5' Type of Filter Around Screen Silica Sand Depth/Elevation of 9.51 Bottom of Screen <----Depth/Elevation of Bottom of 9.75 Borehole WELL MATERIALS DIAMETER LENGTH TYPE

> 6" 2"

2"

PROTECTIVE CASING

RISER PIPE

WELL SCREEN

Road Box

PVC

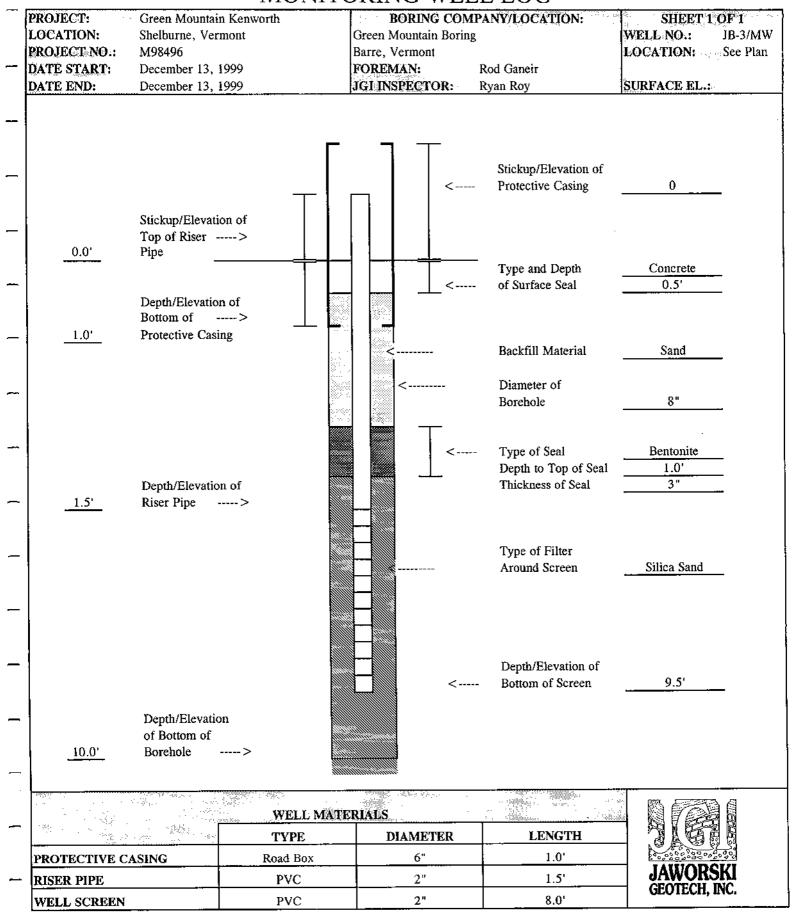
PVC

1.0'

1.5"

8.01

GEOTECH, INC.



PROJECT:

Green Mountain Kenworth

BORING COMPANY/LOCATION:

Green Mountain Boring WELL NO.: JB-4/MW LOCATION: Shelburne, Vermont LOCATION: See Plan PROJECT NO.: Barre, Vermont M98496 Rod Ganeir DATE START: December 13, 1999 FOREMAN: SURFACE EL.: JGI INSPECTOR: Ryan Roy December 13, 1999 DATE END: Stickup/Elevation of Protective Casing Stickup/Elevation of Top of Riser ---->  $0.0^{\circ}$ Pipe Type and Depth Concrete of Surface Seal 0.5 Depth/Elevation of Bottom of 1.0 Protective Casing Backfill Material Sand Diameter of 811 Borehole Type of Seal Bentonite Depth to Top of Seal 1.0' 3" Thickness of Seal Depth/Elevation of Riser Pipe 1.5 Type of Filter Silica Sand Around Screen Depth/Elevation of Bottom of Screen 9.5 Depth/Elevation of Bottom of Borehole 10.01

4, 7 (2.44) 11 (2.44)	WELL MATE	RIALS	
· · · · · · · · · · · · · · · · · · ·	ТҮРЕ	DIAMETER	LENGTH
PROTECTIVE CASING	Road Box	6"	1.0'
RISER PIPE	PVC	2"	1.5'
WELL SCREEN	PVC	2"	8.0'



SHEET 1 OF 1

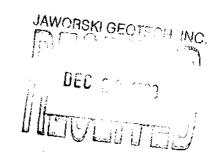


## Laboratory Services

P.O. Box 186 Canterbury, N.H. 03224 Ph. 603-783-9097 • Fax 603-783-0360

12-27-1999,15:55

Ms. Debbie Cornn Jaworski Geotech Inc. 150 Zachary Road Manchester, N.H. 03103



Dear Ms. Cornn:

Please find enclosed the reports, and invoice for the samples that were logged in on, 12-17-1999.

AAI Sample	Date Sampled	Project Description Sample Location	
	2-13-1999 2-13-1999	N98496E GREEN MTN. KENWORTH JB-4/SS-3 N98496E GREEN MTN. KENWORTH JB-5/SS-1	

To perform these analyses, the following methods were used:

## QTY. EPA Methodologies/Applications

- 2 VOA + TPH Soil fuel oil Mod. 8260/8100
- 1 Soil/Solid Digestion
- 7 Metals analysis (excluding mercury)
- 1 Mercury analysis

Thank you for using Aquarian Analytical Inc. on this project. If I can be of any further help, please feel free to call.

Sincerely,

William M. Rice

Laboratory Director

doc. L12028



## Laboratory Services

P.O. Box 186
Canterbury, N.H. 03224
Ph. 603-783-9097 • Fax 603-783-0360

12-27-1999,15:55

As part of Aquarian's ongoing quality assurance program, all analyses included the following quality assurance measures.

Samples were received in an acceptable condition.

Samples were prepared and analyzed within the appropriate hold time specified in the method referred to on the analyses sheet.

The instrument that was used for the analyses was calibrated and/or tuned at the required frequency.

A daily calibration check was performed.

A daily blank was run, and contamination was not observed at levels that would affect the analyses.

For all work, internal standards, and surrogates gave appropriate response levels.

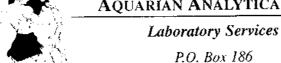
Matrix spikes were added where appropriate, and recoveries were within the acceptable range.

Duplicates were run at the frequency specified in the applicable state or federal regulations.

In addition to the above steps, all original-raw data is on file at Aquarian Analytical's offices for inspection when required.

Exceptions (if any)

Certification



P.O. Box 186

Canterbury, N.H. 03224

Ph. 603-783-9097 • Fax 603-783-0360

Volatile Organic Report 12-27-1999,15:49 Sample 51201

R.R.R.

JB-4/SS-3

SHELBURNE

Project N98496E GREEN MTN. KENWORMatrix Soil/Solid

 Date Sampled
 12-13-1999,15:45
 Sampler

 Date Logged In
 12-17-1999,11:24
 Location

 Date of Analysis
 12-20-1999
 Town

% solids 89.12%

-	Organic Compound	Result mg/kg	Det. Lim. mg/kg
-	Benzene Bromobenzene	BD BD	0.200
	Bromodichloromethane	BD	0.200
	Bromoform	BD	0.200
	Bromomethane	BD	0.200
ŀ	n-Butylbenzene	BD	0.200
	sec-Butylbenzene	BD	0.200
-	tert-Butylbenzene	BD	0.200
	Carbon-Tetrachloride	BD	0.200
	Chlorobenzene	BD	0.200
	Chloroethane	BD	0.200
	Chloroform	BD	0.200
	Chloromethane	BD	0.300
	2-Chlorotoluene	BD	0.200
-	4-Chlorotoluene	BD	0.200
-	Dibromochloromethane	BD	0.200
	1,2 Dibromo-3-Chloropropane	BD	0.800
	1,2 Dibromoethane	BD	0.800
	Dibromomethane	BD	0.200
ļ	1,2 Dichlorobenzene	BD	0.200
	1,3 Dichlorobenzene	BD	0.200
_	1,4 Dichlorobenzene	BD	0.200
	Dichlorodifluoromethane	BD	0.400
	1,1 Dichloroethane	BD	0.200
	1,2 Dichloroethane	BD	0.200
	1,1 Dichloroethene	BD	0.200
	cis-1,2 Dichloroethene	BD	0.200
	trans-1,2 Dichloroethene	BD	0.200
	1,2 Dichloropropane	BD	0.400
	1,3 Dichloropropane	BD	0.200
	2,2 Dichloropropane	BD	0.200
_	1,1 Dichloropropene	BD	0.200
	cis-1,3 Dichloropropene	BD	0.200
	trans-1,3 Dichloropropene	BD	0.200

# Laboratory Services

P.O. Box 186

Canterbury, N.H. 03224

Ph. 603-783-9097 • Fax 603-783-0360

Volatile Organic Report 12-27-1999,15:49 Sample 51201

Project Location N98496E GREEN MTN. KENWORTH

JB-4/SS-3

Matrix

Soil/Solid

Organic Compound	Result mg/kg	Det. Lim. mg/kg
Ethylbenzene	BD	0.200
Hexachlorobutadiene	BD	0.400
Isopropylbenzene	BD	0.200
p-Isopropyltoluene	BD	0.200
Methylene Chloride	BD	0.600
Naphthalene	1.080	0.400
n-Propylbenzene	BD	0.200
Styrene	BD	0.200
1,1,1,2 Tetrachloroethane	BD	0.200
1,1,2,2 Tetrachloroethane	BD	0.200
Tetrachloroethene	BD	0.200
Toluene	BD	0.200
1,2,3 Trichlorobenzene	BD	0.400
1,2,4 Trichlorobenzene	BD	0.400
1,1,1 Trichloroethane	BD	0.200
1,1,2 Trichloroethane	BD	0.200
Trichloroethene	BD	0.200
Trichlorofluoromethane	BD	0.400
1,2,3 Trichloropropane	BD	0.200
1,2,4 Trimethylbenzene	0.464	0.200
1,3,5 Trimethylbenzene	BD	0.200
Vinyl Chloride	BD	0.200
o-Xylene	BD	0.200
m&p-Xylene	BD	0.200
Ethyl Ether	BD	3.000
Acetone	BD	10.000
Methylethylketone MEK	BD	5.000
Methylisobutylketone	BD	5.000
Tetrahydrofuran	BD	3.000
Methyl-t-butyl ether	BD	0.200
Total Pet. Hydrocarbons	470.0	10.0
Method = EPA-8100 (mod.)		Results for TPH are
riction - Lili old (metr)		expressed in mg/kg (pg

## Comments:

TPH was performed with #2 fuel oil as the standard.

Method of VOA Analysis = EPA-8260B

- BD = Below Detection Limit - Results are in parts per million (ppm) unless noted.

Page 2



## Laboratory Services

P.O. Box 186 Canterbury, N.H. 03224 Ph. 603-783-9097 • Fax 603-783-0360

> Volatile Organic Report 12-27-1999,15:49 Sample 51202

Project N98496E GREEN MTN. KENWORMatrix Soil/Solid

 Date Sampled
 12-13-1999,16:15
 Sampler
 R.R.R.

 Date Logged In
 12-17-1999,11:27
 Location
 JB-5/SS-1

 Date of Analysis
 12-20-1999
 Town
 SHELBURNE

% solids 90.36%

	Organic Compound	Result mg/kg	Det. Lim. mg/kg
<u>  </u>	Benzene	BD	0.300
	Bromobenzene	BD	0.300
	Bromodichloromethane	BD	0.300
	Bromoform	BD	0.300
	Bromomethane	BD	0.300
	n-Butylbenzene	0.789	0.300
_	sec-Butylbenzene	BD	0.300
	tert-Butylbenzene	BD	0.300
	Carbon-Tetrachloride	BD	0.300
	Chlorobenzene	BD	0.300
-	Chloroethane	BD	0.300
	Chloroform	BD	0.300
	Chloromethane	BD	0.450
<b>—</b>	2-Chlorotoluene	BD	0.300
	4-Chlorotoluene	BD	0.300
- }	Dibromochloromethane	BD	0.300
1	1,2 Dibromo-3-Chloropropane	BD	1.200
-	1,2 Dibromoethane	BD	1.200
	Dibromomethane	BD	0.300
	1,2 Dichlorobenzene	BD	0.300
-	1,3 Dichlorobenzene	BD	0.300
	1,4 Dichlorobenzene	BD	0.300
1	Dichlorodifluoromethane	BD	0.600
_	1,1 Dichloroethane	BD	0.300
	1,2 Dichloroethane	BD	0.300
1	1,1 Dichloroethene	BD	0.300
	cis-1,2 Dichloroethene	BD	0.300
-	trans-1,2 Dichloroethene	BD	0.300
	1,2 Dichloropropane	BD	0.600
ļ	1,3 Dichloropropane	BD	0.300
_	2,2 Dichloropropane	BD	0.300
	1,1 Dichloropropene	BD	0.300
	cis-1,3 Dichloropropene	BD	0.300
	trans-1,3 Dichloropropene	BD	0.300

# Laboratory Services

P.O. Box 186

Canterbury, N.H. 03224

Ph. 603-783-9097 • Fax 603-783-0360

Volatile Organic Report 12-27-1999,15:49 Sample 51202

Project Location N98496E GREEN MTN. KENWORTH

JB-5/SS-1

Matrix

expressed in mg/kg (ppm)

Soil/Solid

Page 2

Organic Compound	Result mg/kg	Det. Lim. mg/kg
thylbenzene	BD	0.300
Mexachlorobutadiene	BD	0.600
Sopropylbenzene	BD	0.300
-Isopropyltoluene	0.467	0.300
Methylene Chloride	BD Ì	0.900
aphthalene	BD	0.600
-Propylbenzene	BD	0.300
Styrene	BD	0.300
,1,1,2 Tetrachloroethane	BD	0.300
1,1,2,2 Tetrachloroethane	BD	0.300
Tetrachloroethene	BD	0.300
Toluene	BD	0.300
,2,3 Trichlorobenzene	BD	0.600
1,2,4 Trichlorobenzene	BD	0.600
1,1,1 Trichloroethane	BD	0.300
1,1,2 Trichloroethane	BD	0.300
Trichloroethene	BD	0.300
Trichlorofluoromethane	BD	0.600
1,2,3 Trichloropropane	BD	0.300
1,2,4 Trimethylbenzene	1.600	0.300
1,3,5 Trimethylbenzene	1.560	0.300
Vinyl Chloride	BD	0.300
o-Xylene	BD	0.300
m&p-Xylene	0.807	0.300
Ethyl Ether	BD	4.500
Acetone	BD	15.000
Methylethylketone MEK	BD	7.500
Methylisobutylketone	BD	7.500
Tetrahydrofuran	BD	4.500
Methyl-t-butyl ether	BD	0.300
		<u> </u>
Total Pet. Hydrocarbons	4400.0	10.0
Method = EPA-8100 (mod.)		Results for TPH are
	i	evnressed in ma/ka

#### Comments:

TPH was performed with #4 fuel oil as the standard.

Method of VOA Analysis = EPA-8260B

BD = Below Detection Limit - Results are in parts per million (ppm) unless noted.

## Laboratory Services

P.O. Box 186 Canterbury, N.H. 03224

Ph. 603-783-9097 • Fax 603-783-0360

Total Metals Report 12-27-1999,15:5 Sample 51202

Sample Matrix = Soil/Solid Project = N98496E GREEN MTN. KENWORTH

Date Sampled = 12-13-1999,16:15 Sampler = R.R.R.

Date Logged In = 12-17-1999,11:27 Location = JB-5/SS-1

Date of Analysis = 12-21-1999 Town = SHELBURNE

Mercury Analysis = 12-21-1999

Total Metal	EPA method	Result (ppm-mg/kg)	Det. Lim. (ppm-mg/kg
Arsenic	6020	1.8000	0.5000
Barium	6020	39.0000	1.0000
Cadmium	6020	BD	0.5000
Chromium	6020	9.6000	0.5000
Lead	6020	13.0000	0.5000
Mercury	6020	BD	0.1000
Selenium	6020	BD	0.5000
Silver	6020	BD	5.0000

#### Comments:

TPH was performed with #4 fuel oil as the standard.

Results expressed in milligrams/kilogram, (ppm)



**Laboratory Services** 

153 West Road Canterbury, NH 03324 Phone: (603)783-9097 FAX: (603)783-0360

LABORATORY INFORMATION	PROJEC	T INFORMATION
Turn-around-time: Same Day(100% upcharg	Project#: N98496E	Project Manager: Deb CORNN
Turn-around-time: 24 Hrs (50% upcharge)	Project Name: Groon MMM Kenwatt	Report to: Delo Corne
Turn-around-time: 48 Hrs(25% upcharge)	Town/Site: Doction The Dut I'C)	Invoice to:
Turn-around-time: Normal	Sampler: RRR	Phone:
Account #: 6/700		FAX: 647-4432

	SAMPI	E INFORMAT	TON				Ų	oç'	s-SN	oc'	5		Ţ	PH		1	ΙĘŢ	ALS				o	THE	R-(	List	)	
AAI ID#	Samp	ole ID	Date/Time	Sample Matrix (S-soil / W-water / O-other)	Number of Containers	EPA 524,2 Drinking Water	EPA 8260 X / EPA 8260B	EPA 8260B with TiC's	BTEX / MTBE	Chlorinated Compounds Only	EPA 8270 (A-B/N) :	EPA 8270 ( PAH)	EPA 8015M (Gasoline)	EPA 8100M (Fuel Oil)	- 1		8 RCRA Water (Diss Total	II. I	Miscellaneous-List	EPA 608/8080 PCBS	EPA 608/8080 Pesticides	EPA 8150 Herbicides	EPA SW846-7 Reactivity	EPA 1010 Ignitabilty/Flashpoint	EPA 150.1/9045 pH	EFA 120.1 Conductivity	
51201	JB-4	155-3	12 13 3:45	5	١		χl		$\top$					X	T	T		T		Г					$\top$		$\top$
51202	JB-5	/ <i>5</i> 5-1	12 13 415		1	П	x							χĪ	7	7	1	×									7
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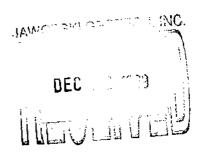
Please refer to back side for sampling guidelines.

## Laboratory Services

P.O. Box 186 Canterbury, N.H. 03224 Ph. 603-783-9097 • Fax 603-783-0360

12-29-1999,14:49

Ms. Debbie Cornn Jaworski Geotech Inc. 150 Zachary Road Manchester, N.H. 03103



Dear Ms. Cornn:

Please find enclosed the reports, and invoice for the samples that were logged in on, 12-21-1999.

AAI Sample	Date Sampled	Project Description Sample Location
51257 1 51258 1	2-19-1999 2-19-1999 2-19-1999 2-19-1999	N98496E / GREEN MTN KENWORTHJB-1/MW N98496E / GREEN MTN KENWORTHJB-2/MW N98496E / GREEN MTN KENWORTHJB-3/MW N98496E / GREEN MTN KENWORTHJB-4/MW

To perform these analyses, the following methods were used:

#### QTY. EPA Methodologies/Applications

- 4 VOA + TPH Water fuel oil Mod. 8260/8100
- 7 Metals analysis (excluding mercury)
- 1 Mercury analysis

Thank you for using Aquarian Analytical Inc. on this project. If I can be of any further help, please feel free to call.

Sincerely,

William M. Rice

Laboratory Director

doc. L12042



#### Laboratory Services

P.O. Box 186 Canterbury, N.H. 03224 Ph. 603-783-9097 • Fax 603-783-0360

12-29-1999,14:49

As part of Aquarian's ongoing quality assurance program, all analyses included the following quality assurance measures.

Samples were received in an acceptable condition.

Samples were prepared and analyzed within the appropriate hold time specified in the method referred to on the analyses sheet.

The instrument that was used for the analyses was calibrated and/or tuned at the required frequency.

A daily calibration check was performed.

A daily blank was run, and contamination was not observed at levels that would affect the analyses.

For all work, internal standards, and surrogates gave appropriate response levels.

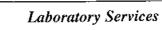
Matrix spikes were added where appropriate, and recoveries were within the acceptable range.

Duplicates were run at the frequency specified in the applicable state or federal regulations.

In addition to the above steps, all original-raw data is on file at Aquarian Analytical's offices for inspection when required.

Exceptions (if any)

Certification



P.O. Box 186 Canterbury, N.H. 03224

Ph. 603-783-9097 • Fax 603-783-0360

Volatile Organic Report 12-29-1999,14:46 Sample 51256

Project = N98496E / GREEN MTN KENWO Matrix = Water

Date Sampled = 12-19-1999 Date Logged In = 12-21-1999,10:27

Date of Analysis = 12-21-1999

Sampler = R. ROY Location = JB-1/MW Town = SHELBURNE

-	Organic Compound	Result ug/L	Det. Lim. ug/L
	Benzene	BD	2
	Bromobenzene	BD	2
	Bromodichloromethane	BD	2
	Bromoform	BD	2
_	Bromomethane	BD	2
	n-Butylbenzene	BD	2
	sec-Butylbenzene	BD	2
	tert-Butylbenzene	BD	2
-	Carbon-Tetrachloride	BD	2
}	Chlorobenzene	BD	2
i	Chloroethane	BD	2
_	Chloroform	BD	2
ļ	Chloromethane	BD	3
-	2-Chlorotoluene	BD	2
	4-Chlorotoluene	BD	2
_	Dibromochloromethane	BD	2
	1,2 Dibromo-3-Chloropropane	BD	8
	1,2 Dibromoethane	BD	8
-	Dibromomethane	BD	2
	1,2 Dichlorobenzene	BD	2
1	1,3 Dichlorobenzene	BD	2
	1,4 Dichlorobenzene	BD	2
	Dichlorodifluoromethane	BD	4
	1,1 Dichloroethane	BD	2
l	1,2 Dichloroethane	BD	2
-	1,1 Dichloroethene	BD	2
	cis-1,2 Dichloroethene	BD	2
	trans-1,2 Dichloroethene	BD	2 4
	1,2 Dichloropropane	BD	2
	1,3 Dichloropropane	BD	2
	2,2 Dichloropropane	BD	2
_ !	1,1 Dichloropropene	BD	2
	cis-1,3 Dichloropropene	BD	2
	trans-1,3 Dichloropropene	BD	

## Laboratory Services

P.O. Box 186

Canterbury, N.H. 03224

Ph. 603-783-9097 • Fax 603-783-0360

Volatile Organic Report 12-29-1999,14:47 Sample 51256

Project

= N98496E / GREEN MTN KENWORTH

\_\_\_\_\_

Matrix = Water

Location = JB-1/MW

Organic Compound	Result ug/L	Det. Lim. ug/L
Ethylbenzene	BD	2
Hexachlorobutadiene	BD	4
Isopropylbenzene	BD	2
p-Isopropyltoluene	BD	2
Methylene Chloride	BD	6
Naphthalene	BD	4
n-Propylbenzene	BD	2
Styrene	BD	2
1,1,1,2 Tetrachloroethane	.BD	2
1,1,2,2 Tetrachloroethane	BD	2
Tetrachloroethene	BD	2
Toluene	BD	2
1,2,3 Trichlorobenzene	BD	4
1,2,4 Trichlorobenzene	BD	4
1,1,1 Trichloroethane	BD	2
1,1,2 Trichloroethane	BD	2
Trichloroethene	BD	2
Trichlorofluoromethane	BD	4
1,2,3 Trichloropropane	BD	2
1,2,4 Trimethylbenzene	BD	2
1,3,5 Trimethylbenzene	BD	2
Vinyl Chloride	BD	2
o-Xylene	BD	2
m&p-Xylene	BD	2
Ethyl Ether	BD	30
Acetone	BD	100
Methylethylketone MEK	BD	50
Methylisobutylketone	BD	50
Tetrahydrofuran	BD	30
Methyl-t-butyl ether	BD	2
Total Pet. Hydrocarbons	4.60	0.50
Method = EPA-8100 (mod.)	1.00	Results for TPH are
MECHON = DEM-0100 (MON.)	j	expressed in mg/L (ppm)

Comments:

TPH was performed with #2 fuel oil as the standard.

Method of Analyses = EPA-8260B

BD = Below Detection Limit - Results are in parts per billion (ppb).

## Laboratory Services

P.O. Box 186 Canterbury, N.H. 03224

Ph. 603-783-9097 • Fax 603-783-0360

Volatile Organic Report 12-29-1999,14:47 Sample 51257

= N98496E / GREEN MTN KENWO Matrix = Water Project

Date Sampled = 12-19-1999 Date Logged In = 12-21-1999,10:29 Date of Analysis = 12-21-1999

Sampler = R. ROYLocation = JB-2/MW = SHELBURNE Town

-	Organic Compound	Result ug/L	Det. Lim. ug/L
-	Benzene	BD BD	2 2
1	Bromobenzene Bromodichloromethane	BD	2
1	Bromoform	BD	2
-	Bromomethane	BD	$\frac{\overline{2}}{2}$
	n-Butylbenzene	BD	2
	sec-Butylbenzene	BD	2
_	tert-Butylbenzene	BD	2
}	Carbon-Tetrachloride	BD	2
	Chlorobenzene	BD	2
	Chloroethane	BD	2
~	Chloroform	BD	2
Į	Chloromethane	BD	3
	2-Chlorotoluene	BD	2
-	4-Chlorotoluene	BD	2
	Dibromochloromethane	BD	2
	1,2 Dibromo-3-Chloropropane	BD	8
_	1,2 Dibromoethane	BD	8
Į	Dibromomethane	BD	2
	1,2 Dichlorobenzene	BD	2
	1,3 Dichlorobenzene	BD	2
	1,4 Dichlorobenzene	BD	2
-	Dichlorodifluoromethane	BD	4
	1,1 Dichloroethane	BD	2
	1,2 Dichloroethane	BD	2
	1,1 Dichloroethene	BD	2
	cis-1,2 Dichloroethene	BD	2
_	trans-1,2 Dichloroethene	BD	2
	1,2 Dichloropropane	BD	4
	1,3 Dichloropropane	BD	2
]	2,2 Dichloropropane	BD	2
	1,1 Dichloropropene	BD	2
	cis-1,3 Dichloropropene	BD	2 2
	trans-1,3 Dichloropropene	BD	

## Laboratory Services

P.O. Box 186

Canterbury, N.H. 03224

Ph. 603-783-9097 • Fax 603-783-0360

Volatile Organic Report 12-29-1999,14:47 Sample 51257

Project

= N98496E / GREEN MTN KENWORTH

Matrix = Water

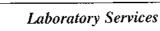
= JB-2/MWLocation

_ (	Organic Compound	Result ug/L	Det. Lim. ug/L
E	thylbenzene	BD	2
	exachlorobutadiene	BD	4
	sopropylbenzene	BD	2
	-Isopropyltoluene	BD	2
M	ethylene Chloride	BD	6
	aphthalene	BD	4
	-Propylbenzene	BD	2
	tyrene	BD	2
1	,1,1,2 Tetrachloroethane	BD	2
-	,1,2,2 Tetrachloroethane	BD	2
T	etrachloroethene	BD	2
	oluene	BD	2
	,2,3 Trichlorobenzene	BD	4
	,2,4 Trichlorobenzene	BD	4
1	,1,1 Trichloroethane	BD	2
_   1	,1,2 Trichloroethane	BD	2
_   崇	richloroethene	BD	2
	richlorofluoromethane	BD	4
	,2,3 Trichloropropane	BD	2
	,2,4 Trimethylbenzene	D	2
	,3,5 Trimethylbenzene	BD	2
	'inyl Chloride	BD	2
	-Xylene	BD	2
	-kylene &p-Xylene	BD	2
	thyl Ether	BD	30
	cetone	BD	100
	Methylethylketone MEK	BD	50
M M	Methylisobutylketone	BD	50
1 1	etrahydrofuran	BD	30
-	Methyl-t-butyl ether	BD	2
	echyr-c-bacyr cener		
_	Cotal Pet. Hydrocarbons	5.80	0.50
N	Method = EPA-8100 (mod.)		Results for TPH are
14	Identified = High Oldo (mode.)		expressed in mg/L (ppm)

Method of Analyses = EPA-8260B

<sup>&</sup>lt;u>Comments:</u>
TPH was performed with #2 fuel oil as the standard.

BD = Below Detection Limit - Results are in parts per billion (ppb).



P.O. Box 186

Canterbury, N.H. 03224

Control of Eart 603, 783

Ph. 603-783-9097 • Fax 603-783-0360

Volatile Organic Report 12-29-1999,14:47 Sample 51258

Project = N98496E / GREEN MTN KENWO Matrix = Water

Date Sampled = 12-19-1999 Date Logged In = 12-21-1999,10:29 Sampler = R. ROY Location = JB-3/MW Town = SHELBURNE

Date of Analysis = 12-21-1999

Det. Lim. ug/L Result ug/L Organic Compound 2 BDBenzene 2 BDBromobenzene 2 BDBromodichloromethane 2 BDBromoform 2 BD Bromomethane 2 BDn-Butylbenzene 2.. BDsec-Butylbenzene 2 BDtert-Butylbenzene 2 Carbon-Tetrachloride BD 2 BDChlorobenzene 2 BDChloroethane 2 BD Chloroform 3 BD Chloromethane 2 BD2-Chlorotoluene 2 BD 4-Chlorotoluene 2 BDDibromochloromethane 8 BD1,2 Dibromo-3-Chloropropane 8 BD1,2 Dibromoethane 2 BD Dibromomethane 2 BD 1,2 Dichlorobenzene 2 1,3 Dichlorobenzene BD2 BD1,4 Dichlorobenzene BDDichlorodifluoromethane 2 BD1,1 Dichloroethane BD1,2 Dichloroethane 2 BD1,1 Dichloroethene 2 BDcis-1,2 Dichloroethene 2 trans-1,2 Dichloroethene BDBD 1,2 Dichloropropane 2 BD 1,3 Dichloropropane BD2,2 Dichloropropane 2 BD1,1 Dichloropropene 2 BDcis-1,3 Dichloropropene trans-1,3 Dichloropropene BD

## Laboratory Services

P.O. Box 186

Canterbury, N.H. 03224

Ph. 603-783-9097 • Fax 603-783-0360

Volatile Organic Report 12-29-1999,14:47 Sample 51258

Project

= N98496E / GREEN MTN KENWORTH

bampic Sizso

Location

= JB-3/MW

Matrix = Water

Organic Compound	Result ug/L	Det. Lim. ug/L
Ethylbenzene	BD	2
Hexachlorobutadiene	BD	4
Isopropylbenzene	BD	2
p-Isopropyltoluene	BD .	2
Methylene Chloride	BD	6
Naphthalene	BD	4
n-Propylbenzene	BD	2
Styrene	BD	2
1,1,1,2 Tetrachloroethane	BD	2
1,1,2,2 Tetrachloroethane	BD	2
Tetrachloroethene	BD	2
Toluene	BD	2
1,2,3 Trichlorobenzene	BD	4
1,2,4 Trichlorobenzene	BD	4
1,1,1 Trichloroethane	BD	2
1,1,2 Trichloroethane	BD	2
Trichloroethene	4	2
Trichlorofluoromethane	BD	4
1,2,3 Trichloropropane	BD	2
1,2,4 Trimethylbenzene	BD	2
1,3,5 Trimethylbenzene	BD	2
Vinyl Chloride	BD	2
o-Xylene	BD	2
m&p-Xylene	BD	2
Ethyl Ether	BD	30
Acetone	BD	100
Methylethylketone MEK	BD	50
Methylisobutylketone	BD	50
Tetrahydrofuran	BD	30 .
Methyl-t-butyl ether	83	2
Total Pet. Hydrocarbons	4.70	0.50
Method = EPA-8100 (mod.)		Results for TPH are expressed in mg/L (ppm)

<u>Comments:</u>

TPH was performed with #2 fuel oil as the standard.

Method of Analyses = EPA-8260B

BD = Below Detection Limit - Results are in parts per billion (ppb).



## Laboratory Services

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> Volatile Organic Report 12-29-1999,14:47 51259 Sample

= N98496E / GREEN MTN KENWO Matrix = Water Project

Date Sampled = 12-19-1999 Date Logged In = 12-21-1999,10:29

Date of Analysis = 12-21-1999

Sampler = R. ROYLocation = JB-4/MW

= SHELBURNE Town

-	Organic Compound	Result ug/L	Det. Lim. ug/L
_	Benzene	BD	2
	Bromobenzene	BD	2
	Bromodichloromethane	BD	2
_	Bromoform	BD	2
]	Bromomethane	BD	2
1	n-Butylbenzene	BD	2
İ	sec-Butylbenzene	BD	2
~	tert-Butylbenzene	BD	2
	Carbon-Tetrachloride	BD	2
	Chlorobenzene	BD	2
	Chloroethane	BD	2
}	Chloroform	BD	2
Ì	Chloromethane	BD	3
	2-Chlorotoluene	BD	2
	4-Chlorotoluene	BD	2
	Dibromochloromethane	BD	2
İ	1,2 Dibromo-3-Chloropropane	BD	8
	1,2 Dibromoethane	BD	8
	Dibromomethane	BD	2
- 1	1,2 Dichlorobenzene	BD	2
	1,3 Dichlorobenzene	BD	2
_	1,4 Dichlorobenzene	BD	2
	Dichlorodifluoromethane	BD	4
	1,1 Dichloroethane	BD	2
	1,2 Dichloroethane	BD	2
	1,1 Dichloroethene	BD	2
	cis-1,2 Dichloroethene	BD	2
_	trans-1,2 Dichloroethene	BD.	2
	1,2 Dichloropropane	BD	4
	1,3 Dichloropropane	BD	2
	2,2 Dichloropropane	BD	2
	1,1 Dichloropropene	BD	2
	cis-1,3 Dichloropropene	BD	2
	trans-1,3 Dichloropropene	BD	2

## Laboratory Services

P.O. Box 186

Canterbury, N.H. 03224

Ph. 603-783-9097 • Fax 603-783-0360

Volatile Organic Report 12-29-1999,14:47 Sample 51259

Project

= N98496E / GREEN MTN KENWORTH

Matrix = Water

Location = JB-4/MW

	Organic Compound	Result ug/L	Det. Lim. ug/L
	Ethylbenzene	BD	2
	Hexachlorobutadiene	BD	4
-	Isopropylbenzene	BD	2
	p-Isopropyltoluene	BD	2
İ	Methylene Chloride	BD	6
_	Naphthalene	BD	4
_	n-Propylbenzene	BD	2
	Styrene	BD	2
	1,1,1,2 Tetrachloroethane	BD	2
_	1,1,2,2 Tetrachloroethane	BD	2
1	Tetrachloroethene	BD	2
1	Toluene	BD	2
	1,2,3 Trichlorobenzene	BD	4
ļ	1,2,4 Trichlorobenzene	BD	4
	1,1,1 Trichloroethane	BD	2
	1,1,2 Trichloroethane	BD	2
-1	Trichloroethene	BD	2
	Trichlorofluoromethane	·BD	4
	1,2,3 Trichloropropane	BD	2
_	1,2,4 Trimethylbenzene	BD	2
	1,3,5 Trimethylbenzene	BD	2
1	Vinyl Chloride	BD	2
		2	2
_	o-Xylene	BD	2
	m&p-Xylene	BD	30
	Ethyl Ether Acetone	BD	100
-	Methylethylketone MEK	BD	50
ļ	Methylisobutylketone	BD	50
ĺ	Tetrahydrofuran	BD	30
	Methyl-t-butyl ether	5	2
	Methyl-t-butyl ether		
	Total Pet. Hydrocarbons	7.50	0.50
_	Method = EPA-8100 (mod.)	,,	Results for TPH are
	Method = BFA-6100 (mod.)		expressed in mg/L (ppm)
		I	

Comments:

TPH was performed with #2 fuel oil as the standard.

- Spike sample indicates matrix effect, barium.

Duplicate sample indicates heterogeneity, arsenic, chromium. Method of Analyses = EPA-8260B

## Laboratory Services

P.O. Box 186

Canterbury, N.H. 03224

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#### RCRA Metals

12-29-1999,14:4

#### Sample 51259

Sample Matrix = Water Project = N98496E / GREEN MTN KENWORTH

EPA method	Result (ppm-mg/L)	Det. Lim. (ppm-mg/L)
200.8	0.0010	0.0010
200.8	0.0850	0.0020
200.8	BD	0.0010
200.8	0.0080	0.0030
200.8	BD	0.0020
200.8	BD	0.0002
200.8	BD	0.0020
200.8	BD	0.0100
	200.8 200.8 200.8 200.8 200.8 200.8 200.8	200.8 0.0010 200.8 0.0850 200.8 BD 200.8 0.0080 200.8 BD 200.8 BD 200.8 BD

#### Comments:

Total Metals

Results expressed in milligrams/liter, (ppm)

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Laboratory Services

153 West Road Canterbury, NH 03324 Phone: (603)783-9097 FAX: (603)783-0360

DABORATORY INFORMATION	PROJE	TO INFORMATION
Turn-around-time: Same Day(100% upcharg		Project Manager: . Deb CoeNO
Tues assured time: 24 Hrs (50% upcharge)	Project Name: N98496E	Report to:
Turn-around-time: 48 Hrs(25% upcharge)	Town/Site: Shelbuene, M. Vermont	Invoice to:
	Sampler: Rivan Por	Phone:
Account #: 6/700	Company: Janoarski Geotech	FAX: 1047-4432

	SAMPLE INFORMAT	TION				VC	C's	sv	oc'	5		T	PH		WE	TAL	S				ΟŢ	HE	R-(	Lis	9	Ų.
AA1 ID#	Sample ID	Date/Time	Sample Matrix (S-soli / W-water / O-other)	Number of Containers	EPA 524,2 Drinking Water	EPA 8260 X / EPA 8260B	# \ \	BTEX/MTBE	Chlorinated Compounds Only	EPA 8270 (A-B/N)	EPA 8270 (PAH)	EPA 8015M (Gasoline)	EPA 8100M (Fuel Oil)		[일	္မူ	8 RCRA Soil (TCLPTotal)	Miscellaneous-List	EPA 608/8080 PCBS	EPA 608/8080 Pesticides	EPA 8150 Herbicides	EPA SW846-7 Reactivity	EPA 1010 Ignitabilty/Flashpoint	EPA 150,1/9045 pH	EPA 120.1 Conductivity	
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